

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/06114

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K9/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K A61L A62D C02F B01D A23L B09C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal, WPI Data, PAJ, CHEM ABS Data, MEDLINE, FSTA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GILL IQBAL ET AL: "Degradation of organophosphorous nerve agents by enzyme-polymer nanocomposites: Efficient biocatalytic materials for personal protection and large-scale detoxification." BIOTECHNOLOGY AND BIOENGINEERING, vol. 70, no. 4, 20 November 2000 (2000-11-20), pages 400-410, XP002210869 ISSN: 0006-3592 the whole document ----- -/--	6,7, 9-11,13



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

* & * document member of the same patent family

Date of the actual completion of the international search

28 August 2002

Date of mailing of the international search report

16/09/2002

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KOPER OLGA ET AL: "Development of reactive topical skin protectants against sulfur mustard and nerve agents." JOURNAL OF APPLIED TOXICOLOGY., vol. 19, no. Suppl. 1, December 1999 (1999-12), pages S59-S70, XP001096476 ISSN: 0260-437X the whole document ----	1-5, 16-18
X	WO 01 17648 A (ZHANG YUEHUA ;IND SCIENCE & TECHNOLOGY NETWO (US); YANG ARTHUR JIN) 15 March 2001 (2001-03-15) page 1, line 16 -page 2, line 4 page 4, line 27 -page 5, line 31 page 13, line 8 - line 29 ----	1-5,9-11
X	WO 00 47236 A (BIOSTREAM INC) 17 August 2000 (2000-08-17) page 29, line 24 -page 31, line 11 page 85, line 3 - line 10 ----	6,7, 16-18
X	US 6 057 488 A (KOPER OLGA ET AL) 2 May 2000 (2000-05-02) column 2, line 21 - line 49 ----	1-5,16, 17
X	US 5 914 436 A (KHALEEL ABBAS ET AL) 22 June 1999 (1999-06-22) column 1, line 66 -column 2, line 36 ----	1-5
X	US 5 990 373 A (KLABUNDE KENNETH J) 23 November 1999 (1999-11-23) abstract column 3, line 51 - line 67 ----	1-5
X	DE 198 25 856 A (LABTEC GES FUER TECHNOLOGISCHE) 16 December 1999 (1999-12-16) the whole document ----	18
X	US 5 993 831 A (HANDJANI ROSE-MARIE ET AL) 30 November 1999 (1999-11-30) column 2, line 1 - line 10 column 3, line 49 - line 57 -----	18

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

1. The expression "bioparticle" used in the independent claims 1, 6, 9, 16 and 17 is not supported by the description of the present application. According to the description, the particles can be composed of inorganic or polymeric organic material (page 11, line 9-11), metal oxide (page 11, line 12), metal carbonate (page 11, line 12), polyoxyethylene-polyoxypropylene copolymers (page 15, line 14-30), metals, semiconductors, carbons (page 16, line 3-5) or silica (page 16, line 8-14).

Thus, the term "bioparticle" is misleading and unclear leaving the skilled man in doubt as to the real extent of scope of protection is to be sought.

2. Therefore, present claims 1-20 relate to an extremely large number of possible compounds and methods. In fact, the claims lack clarity and conciseness within the meaning of Article 6 PCT to such an extent as to render a meaningful search of the claims impossible.

3. Consequently, the search has been carried out for those parts of the application which do appear to be clear and concise. Because of the lack of real technical features in claims 1-14 and also the lack of concrete and clearly distinguishable examples, the search was namely based on the different kind of particles presented in figure 1. Therefore, claims 1-20 are searched incompletely.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International application No.
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B x I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

B x II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/06114

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0117648	A	15-03-2001	AU 7353000 A WO 0117648 A1	10-04-2001 15-03-2001
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